

### P3.12 | The interactive gazetteer of a 150-year-old globe (#728)

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[A full-length version is available and can be opened here:](#)

[extendedAbstract\112\\_proceeding.\\*](#)

This work was a part of a project to digitize a 150-year-old manuscript globe, and to re-draw it for saving it from further decay. The 132 cm diameter globe was created by László Perczel in Kömlöd, Hungary, in 1862.[1] The project[2] is going on within the framework of the Virtual Globes Museum, but now our digital reconstruction project of the one of the largest globes in Central Europe before long is going to reach the end. A highlight part of the project was saving the names to the posterity. It was not easy work, because the globe surface is badly damaged. It got a lacquer layer, and this layer began turning to yellow soon and dissolving some of the red ink, making a part of the names illegible. Unfortunately, when this globe was moved to shelter during World War II, parts of the globe map tore around the Equator. Despite, the names are of huge cultural value. Using of modern technologies the contemporary names become available for examination. The first part of this subproject was the identification of the names on the globe. Those students who were involved in the work collected every name including also the partially legible names, and created a database in MapInfo. To recognize the names they used the Google Earth. Afterwards, the names were classified in two major categories: the settlement names and the other geographical names like the name of rivers, lands, or seas etc. The principle of this classification is that the settlements can be represented by one coordinate pair in small scale, while the names of other features show up as polylines or polygon objects. In the latter case, another solution is needed. In a gazetteer to a map, the users search for names, and they find the geographical objects by grids. Therefore, the geographical grid by 5 degrees was chosen the network for searching. Each square is numbered from 1 to 72 by five degrees between the longitudes; the squares between latitudes moving away from the Equator to the poles are lettered A, B, C etc. by five degrees. To avoid the similar lettering on the globe, the squares on the northern hemisphere got "N" prefix, and on the southern an "S" prefix (e.g. NA or SE). After every name was entered into the list, a MySQL database was built. The visualization and searching in this database on the net need an HTML page. The HTML page was written in PHP because of the excellent function of this scripting language. However, this is not enough to visualize spatial data. The best choice is to let the names and places be seen in the Google Earth, because the manuscript "map" was originally a globe, and the Google Earth plug-in give several possibilities to developers, for example:

- Switchable layers among the original Perczel's globe, the reconstructed one, and the satellite photos, where the users can set the transparency of the overlays.
- Different KMZ layers for predefined categories in the database (using MySQL queries and PHP).
- In the Infowindow, the users can find information about the selected contemporary name, current name (if known), object type, the coordinates, and the code in the developed searching grid.

As several types of names can be found in this database, it is possible to reduce the name search results by types or geographical regions. This homepage uses the newest HTML techniques, like HTML5, some asynchronous loading functions, and the design is based on CSS3 style sheet. The digital gazetteer of Perczel's globe allows us to identify the names on an old globe; furthermore, the authors plan to use this method to examine the name changes on globes in education. For details see <http://vgm.elte.hu/perczel>

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[1] **M. Márton, G. Gercsák**: The present state of reconstructing a 150 year old globe, ICC 2011, Paris.

[2] **M. Gede, M. Márton, Zs. Ungvári**: Digital Reconstruction of Perczel's Globe. *5th International Workshop on Digital Approaches in Cartographic Heritage*. Vienna, 22-24 February 2010



### The interactive gazetteer:

The looked up name is showing on Google Earth with switched on searching grid